

Mushroom head square neck bolts

DIN
603

Flachrundsrauben mit Vierkantansatz

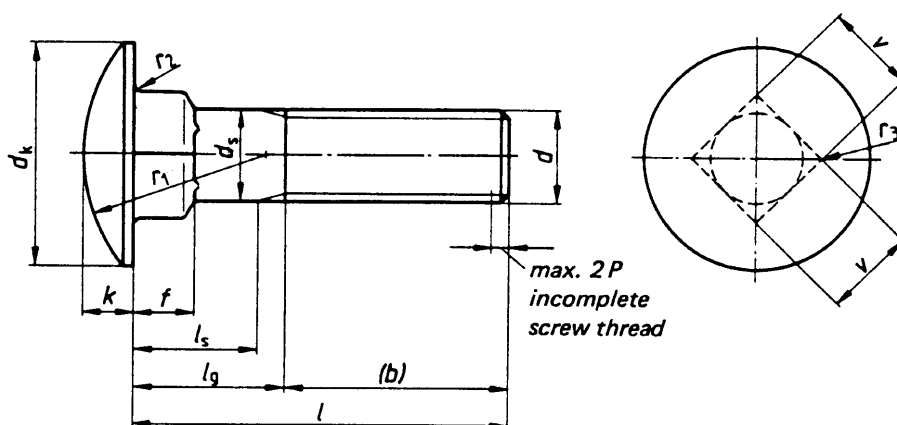
Supersedes 11.70 edition

As it is current practice in standards published by the International Organization for Standardization (ISO), the comma has been used throughout as a decimal marker.

Dimensions in mm

1 Field of application

This standard specifies mushroom head square neck bolts with metric threads M5 to M20 of product grade C.

2 Dimensions, designation

Designation of a mushroom head square neck bolt, with screw thread $d = M 10$, length $l = 70$ mm and strength category 3.6 or 4.6 (at manufacturer's discretion):

Mushroom head bolt DIN 603 – M 10 x 70

Continued on pages 2 to 5

Screw thread d			M 5	M 6	M 8	M 10	M 12	M 16	M 20							
P	1)		0,8	1	1,25	1,5	1,75	2	2,5							
b	2)		16	18	22	26	30	38	46							
	3)		22	24	28	32	36	44	52							
	4)		—	—	41	45	49	57	65							
d_k	max.		13,55	16,55	20,65	24,65	30,65	38,8	46,8							
	min.		12,45	15,45	19,35	23,35	29,35	37,2	45,2							
d_s 5)	max.		5	6	8	10	12	16	20							
	min.		4,52	5,52	7,42	9,42	11,3	15,3	19,16							
f	max.		4,1	4,6	5,6	6,6	8,75	12,9	15,9							
	min.		2,9	3,4	4,4	5,4	7,25	11,1	14,1							
k	max.		3,3	3,88	4,88	5,38	6,95	8,95	11,05							
	min.		2,7	3,12	4,12	4,62	6,05	8,05	9,95							
r_1	≈		10,7	12,6	16	19,2	24,1	29,3	33,9							
r_2	max.		0,5	0,5	0,5	0,5	1	1	1							
r_3 6)	max.		0,75	0,9	1,2	1,5	1,8	2,4	3							
v 5)	max.		5,48	6,48	8,58	10,58	12,7	16,7	20,84							
	min.		4,52	5,52	7,42	9,42	11,3	15,3	19,16							
l			Shank lengths l_s and l_g													
Nominal size	min.	max.	l_s min.	l_g max.	l_s min.	l_g max.	l_s min.	l_g max.	l_s min.	l_g max.	l_s min.	l_g max.	l_s min.	l_g max.	l_s min.	l_g max.
16	15,1	16,9	—	8	—	10	—	12	—	14	—	16	—	18	—	20
20	18,95	21,05	—	8	—	10	—	12	—	14	—	16	—	18	—	20
25	23,95	26,05	—	8	—	10	—	12	—	14	—	16	—	18	—	20
30	28,95	31,05	—	18	—	10	—	12	—	14	—	16	—	18	—	20
35	33,75	36,25	15	19	12	17	—	12	—	14	—	16	—	18	—	20
40	38,75	41,25	20	24	17	22	11,75	18	—	14	—	16	—	18	—	20
45	43,75	46,25	25	29	22	27	16,75	23	11,5	19	—	18	—	18	—	20
50	48,75	51,25	30	34	27	32	21,75	28	16,5	24	—	18	—	18	—	20
55	53,5	56,5	35	39	32	37	26,75	33	21,5	29	16,25	25	—	23	—	20
60	58,5	61,5	40	44	37	42	31,75	38	26,5	34	21,25	30	—	23	—	20
65	63,5	66,5	45	49	42	47	36,75	43	31,5	39	26,75	35	17	27	—	20
70	68,5	71,5	50	54	47	52	41,75	48	36,5	44	31,25	40	22	32	—	28,5
80	78,5	81,5	60	64	57	62	51,75	58	46,5	54	41,25	50	32	42	21,5	34
90	88,25	91,75			67	72	61,75	68	56,5	64	51,25	60	42	52	31,5	44
100	98,25	101,75			77	82	71,75	78	66,5	74	61,25	70	52	62	41,5	54
110	108,25	111,75			87	92	81,75	88	76,5	84	71,25	80	62	72	51,5	64
120	118,25	121,75			97	102	91,75	98	86,5	94	81,25	90	72	82	61,5	74
130	128	132			101	106	95,75	102	90,5	98	85,25	94	76	86	65,5	78
140	138	142			111	116	105,75	112	108,5	108	95,25	104	86	96	75,5	88
150	148	152			121	126	115,75	122	110,5	118	105,25	114	96	106	85,5	98
160	156	164							120,5	128	115,25	124	106	116	95,5	108
180	176	184							140,5	148	135,25	144	126	136	115,5	128
200	195,4	204,6							160,5	168	155,25	164	146	156	135,5	148
Lengths exceeding 200 mm must be graded by steps of 20 mm.																
The commercial lengths are indicated by their shank lengths.																
Intermediate lengths should be avoided wherever possible.																
1) to 6) see page 3																